

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

New Part 4 of the Commission's Rules
Concerning Disruptions to Communications

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ET Docket No. 04-35

COMMENTS OF AT&T CORP.

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Pursuant to 47 C.F.R. § 1.415, AT&T Corp. ("AT&T") hereby submits these comments in response to the Commission's Notice of Proposed Rulemaking ("*NPRM*") concerning the extension of disruption reporting requirements to communications providers that are not wireline carriers.¹

INTRODUCTION AND SUMMARY

In the *NPRM*, the Commission proposes to move its outage reporting requirements out of Part 63 and into Part 4 of its rules, contending that rules once applicable only in the common carrier context must now apply more broadly across

¹ In the Matter of New Part 4 of the Commission's Rules Concerning Disruptions to Communications, Notice of Proposed Rulemaking, ET Docket No. 04-35, FCC 04-30 (rel. Feb. 23, 2004) ("*Notice of Proposed Rulemaking*" or "*NPRM*"). The Commission states that the term "communications provider" refers to "an entity that provides two-way voice and/or data communications, and/or paging service, by radio, wire, cable, satellite, and/or lightguide for a fee to one or more unaffiliated entities." *NPRM* n. 1.

numerous communications platforms.² In addition, in an effort to promote rapid reporting and to minimize the administrative burdens on covered entities, the Commission proposes to streamline compliance with the reporting requirements, through electronic filing and other simplifying measures.³ AT&T applauds the Commission's efforts to streamline and simplify the outage reporting requirements, but believes that the Commission's proposed rules will better attain these objectives by making current mandatory reporting requirements voluntary. The Commission should support and endorse many of the Network Reliability Steering Committee/Industry-Led Outage Reporting Initiative ("NRSC/ILORI") proposals. At minimum, if the Commission adopts mandatory outage reporting rules for all communications providers, it should adopt certain fundamentals of the NRSC/ILORI process.

AT&T urges the Commission to adopt outage reporting requirements that promote industry cooperation. Although AT&T recognizes and supports the need for uniform communications disruption reporting by all communications providers, including wireline, wireless, satellite, and cable providers, it believes that the Commission should encourage voluntary reporting by the entire industry. Through participation in the Network Reliability and Interoperability Council ("NRIC") and the NRSC/ILORI, the industry can work to support the voluntary reporting initiative, including the industry adopted mechanized template, continue to evaluate the effectiveness of existing recommended Best Practices and support the development of new Best Practices. AT&T

² *Id.* ¶ 1.

³ *NPRM*, ¶ 1. The Commission states that "[w]e believe that these proposals will allow the Commission to obtain the necessary information regarding services disruptions in an efficient and expeditious manner and achieve significant concomitant public interest benefits.")

believes that this can best be accomplished through voluntary cooperative efforts between the private and public sectors.

First, AT&T disagrees with the Commission's proposal to cease using the number of "customers" in the threshold criteria for communications outage reporting and instead base the criteria on a newly-defined measurement – the number of "user minutes" potentially affected by the outage. *NPRM* ¶ 22. AT&T believes the implementation of user minutes would cause an undue burden on the industry. Rather, AT&T supports the NRSC/ILORI approach of adopting call blocking as the common metric for outage reporting because it provides a direct measure of service impact. AT&T accordingly recommends reporting of outages of at least 30 minutes duration that block 90,000 real time call attempts or 30,000 call attempts for a similar period (historical blocked calls).

Second, AT&T disagrees with the Commission's proposal to replace the "customer" metric with the assigned telephone number-minute" metric. *NPRM* ¶ 34. AT&T supports the NRSC/ILORI approach to adopt call blocking as the common metric which refines the definition of blocked calls to include "incoming" or "outgoing" calls, (depending on the type of failure), rather than "originating" and "terminating" calls.

Third, AT&T disagrees with the Commission's proposed modification to the definition of "special offices and facilities" to include a change from "major airports" to "all airports." *NPRM* ¶ 24. Instead, AT&T supports adoption of the NRSC/ILORI recommendation to expand the meaning of "major airports" to include outage reporting obligations at airports impacting air traffic operations at the top 136 prime hub airports across the country. At minimum, if the Commission adopts the modification to make the

requirement applicable to “all airports,” then AT&T believes that a further clarification is necessary.

Fourth, AT&T disagrees with the Commission’s proposed rule that would shorten the reporting threshold, with respect to reporting outages that affect 911 services, from 24 hours to 30 minutes. *NPRM* ¶ 25. Although AT&T agrees that 24 hours is too long a period of time, it supports the NRSC/ILORI proposal, which recommends lowering the reporting threshold to those that last over 6 hours. Further, AT&T recommends that the Commission should refrain from adopting any reporting requirements affecting 911 services until such time as the NRIC VII Focus Group issues its report.

Fifth, AT&T disagrees with the Commission’s proposed additional outage reporting criteria for failures of communications infrastructure components having significant traffic-carrying capacity (*NPRM* ¶¶ 46-49) because any change in existing equipment would involve extensive software and hardware development and would needlessly impose significant deployment costs on providers. Instead, AT&T recommends that any reporting threshold for DS3 minutes and Signaling System 7 (SS7) should be based on the technical capabilities of the provider and on generally acceptable engineering principles with the understanding and commitment of the service provider that its primary responsibility is to successfully restore service to its customers.

Sixth, AT&T supports the Commission’s efforts to streamline and simplify outage reporting requirements, and in that regard AT&T recommends the adoption of the NRSC/ILORI’s three-step outage reporting process, rather than the two-tier process put forward by the Commission. *NPRM*, ¶ 30. The NRSC/ILORI proposal contemplates that a provider will first notify the Commission, either via e-mail, facsimile or telephone, of

the outage *before* the Initial Report is required to be filed. AT&T believes that this additional step will give the provider more time to provide the Commission with a more complete Initial Report of the outage.

Seventh, while the Commission proposes to delegate authority to the Chief of the Office of Engineering and Technology to make revisions to the filing system and template (*NPRM* ¶ 51), AT&T requests that the Commission clarify that the delegation of authority is limited only to non-substantive changes and that any substantive changes to the Commission's proposed template be accomplished through the Commission's formal Notice and Comment process.

Finally and most importantly, AT&T urges the Commission to support the adoption of the NRSC/ILORI proposal, which would make all outage reporting voluntary in order to take advantage of the protections afforded providers through the Department of Homeland Security's Protection of Critical Infrastructure Information Program Office. This will ensure that all information provided in the outage reports is protected from public disclosure.

ARGUMENT

I. The Commission’s Service Disruption Reporting Requirements Should Encourage Cooperation Among All Communications Providers.

Section 63.100 of the Commission’s rules (47 C.F.R. § 63.100) currently requires only wireline carriers to report significant service disruptions. The Commission has initiated this rulemaking because it expects that service disruption reporting by non-wireline communications providers, including wireless, cable and satellite providers, will provide benefits similar to those that have been achieved by requiring service disruption reports from wireline communications providers.⁴ AT&T recognizes and supports the need for uniform communications disruption reporting by all communications providers, including wireless, satellite, and cable providers, and further proposes to include third parties and small enterprises in the definition.

However, as discussed below in Section II, AT&T recommends using the Network Reliability Steering Committee /Industry-Led Outage Reporting Initiative (“NRSC/ILORI”) process to obtain the necessary information regarding service disruptions. Information sharing, root cause analysis and reliability measures all contribute to maintaining and improving resiliency of the telecommunications capability throughout the country and are a proactive non-regulatory method of maintaining and improving the reliability platform of the communications networks. This industry-led organization has provided the communications industry with consistent statistical and trend analysis of outage data, relevant findings, and timely reliability improvement recommendations for more than ten years. It is positioned to assign work teams to

⁴ *NPRM* ¶ 4.

support the industry findings where adverse trends exist and where further work efforts may be required.

II. Voluntary Service Disruption Reporting Should Be Encouraged And The Work Begun by the NRSC/ILORI Should Be Supported By The Commission.

AT&T supports and encourages all telecommunication companies to become active participants on the NRIC. AT&T believes that Best Practices should continue to be developed through the NRIC. Industry experts sharing Best Practices used in their individual companies has been and should continue to be the venue for identifying new Best Practices and evaluating the effectiveness of existing recommended NRIC Best Practices. AT&T believes that voluntary cooperative efforts between public and private sectors should continue to be encouraged in order to maintain the flexibility and adaptability that is needed to develop industry Best Practices.

The scope of Best Practices developed by the NRIC has expanded over time (*e.g.*, Homeland Security, Interoperability, and Business Continuity). As a result, over 500 new Best Practices have been identified and apply to all segments of the communications sector as well as other essential major utilities. To be effective, however, the process of evaluating existing or developing additional Best Practices for each of the technologies must remain a cooperative effort without the potential for regulatory mandates. For the most part, Best Practices have been developed in a voluntary, cooperative environment with the goal of providing guidance to the industry, and in specific situations it has proven effective to prevent failures or to mitigate or eliminate the effects of a failure on the customer base.

AT&T respectfully suggests that the Commission has placed too much emphasis on the relationship between mandated Commission outage reports and the development of the existing approximately 750 NRIC industry Best Practices. Although AT&T agrees that mandatory outage reporting has contributed to the refinement of existing Best Practices and the development of new Best Practices,⁵ in truth, less than 5% of existing Best Practices can be attributed to knowledge gained from Commission mandated outage reports. The majority of all Best Practices are derived from insights from either individual companies' technical support experience or, since September 11, 2001, from proactively identifying critical infrastructure assets and addressing communications infrastructure vulnerabilities.

As an active participant in the NRIC VI Network Reliability Focus Group efforts, AT&T is aware that the Voluntary Outage Reporting Trial did not result in a robust, fully functional outage reporting process. As the Commission correctly points out, there have been “improvements in the results from the NRIC trial reporting process insofar as the percentage of entities that were actively participating (*i.e.*, either filing initial service disruption reports or filing a report indicating the absence of a service disruption) increased.”⁶ Although the Commission did not act upon the recommendation of its Federal Advisory Committee (NRIC VI) to continue voluntary outage reporting and improve the process, participants in the NRIC VI Network Reliability Focus Group, consisting of members from the wireline, wireless, and cable industry, have formed the

⁵ NPRM, ¶ 7.

⁶ NPRM, ¶ 11.

Industry-Led Outage Reporting Initiative (ILORI). The ILORI effort is now a part of the Alliance for Telecommunications Industry Solutions (ATIS) sponsored Network Reliability Steering Committee (NRSC) and has implemented a new, more robust voluntary outage reporting process. AT&T believes that the NRSC/ILORI's efforts to lead and guide the outage reporting process should continue and be supported by the Commission.

NRSC/ILORI is presently providing process management and internal control oversight for the voluntary reporting program. It incorporates reminders and escalations at the appropriate senior levels that are aimed at assuring timely and accurate outage reporting. Specifically, NRSC/ILORI has developed and implemented a web-based computer program that is being used by wireless, satellite and data service providers/network operators to voluntarily report service disruption data. The team has completed a mechanized reporting template to achieve better consistency and completeness of the data and has implemented a detailed process, including checks, to ensure industry participation. Outage reporting in general is in large part dependent on corporate integrity, and the level of continued corporate commitment would impact the results quality of a mandated as well as a voluntary outage reporting program such as the NRSC/ILORI team has implemented. The National Communication System (NCS) and the industry are both committed to continually improving the reporting process.

III. Any New Reporting Requirements Must Be Balanced and Consistent.

Section 63.100(c) of the Commission's rules requires that an outage report be filed when 30,000 customers are affected for 30 minutes or more.⁷ The Commission asks whether the current rule conjoins the length of time (at least 30 minutes) for which users suffer loss of service with the number of potentially affected users (at least 30,000) in determining whether a communications disruption report must be filed.⁸ The Commission proposes to address both concepts through the use of a "common metric," that can be applied to wireline, wireless, cable, and satellite communications. Acknowledging that the concept of a uniformly applied common metric is properly based on the number of people potentially affected as well as the duration of an outage, irrespective of the communications system, the Commission states that such differences may necessitate variations in developing the metric for these communications.⁹

AT&T believes that the initial measurement of 30,000 customers provides the Commission with sufficiently detailed outage information without imposing an

⁷ *NPRM ¶ 20.* The Commission's rules define 'outage' as "*a significant degradation on the ability of a customer to establish and maintain a channel of communication as a result of failure or degradation in the performance of a carrier's network.*" 47 C.F.R. § 63.100(a) (1). The term 'significant degradation' is not specific enough to provide clear guidance to the carrier as to what constitutes an 'outage.' For example, would there be a threshold bit error rate for a digital facility or would a carrier be responsible for reporting conditions that caused voice calls to be noisy? Not only would it be difficult to determine but it also would result in more onerous reporting requirements. For these reasons, AT&T supports the NRSC/ILORI position, urging the Commission to eliminate the term 'significant degradation' and instead define 'outage' as "*the total loss of the ability of end users to establish and maintain a channel of communications due to a failure in the performance of a service provider's/network operators network.*"

⁸ As the Commission observes, under Section 63.100(c) as presently configured, 29,999 or fewer customers could be without service for decades without triggering the need to file an outage report. This, in turn, would foreclose the Commission's ability to understand and address extended outages that may be occurring on a routine basis, because the duration of the outage would not be taken into account where fewer than 30,000 users are affected. *NPRM ¶ 21.*

⁹ *Id.*

unsupportable reporting burden on the industry. AT&T's outage restoration processes ensure that every outage impacting AT&T customers carries the same priority, including outages involving fewer than 30,000 customers, evidencing a primary commitment to restore safe and reliable service as quickly as possible. AT&T believes, however, that the optimum methodology for reporting network outages should be a "common metric" that measures service impact. AT&T recommends a "common metric" of call blocking because it is a direct measure of customer impact.

A. The Commission Should Adopt Call Blocking As The Common Metric For Outage Reporting.

The Commission also proposes to cease using the number of customers in the threshold criteria for communications outage reporting and to base the criteria on a newly defined measurement instead -- the number of user-minutes potentially affected by the outage.¹⁰ In general, the Commission proposes that the outage duration must be at least 30 minutes and the number of "user-minutes" potentially affected per outage must equal or exceed 900,000. Outages of at least 30 minutes duration would have to be reported whenever the mathematical result of multiplying the outage's duration (expressed in minutes) by the total number of end users potentially affected by the outage is at least 900,000.¹¹

¹⁰ *NPRM*, ¶ 22. ("We define "user-minutes" as the mathematical result of multiplying the outage duration, expressed in minutes, by the number of end users potentially affected by the outage. We will address how the number of potentially affected end users is determined, below, in each section devoted to a particular form of communications (e.g., wireline, wireless, cable, etc.) for which we propose outage reporting requirements.")

¹¹ *Id.*

As the *NPRM* notes, in developing these criteria, the Commission has retained the current rule's metric based on the number of people who may be potentially affected by the outage. The proposed metric focuses on the number of people who would have been affected by the outage if, for example, they had attempted to make or receive telephone calls during the outage (regardless of whether such calls had been attempted). The proposed metric reflects expectations that communications should be available at all times, that people rely on voice and data communications to serve needs that arise unexpectedly in emergency situations as well as every day needs, and that outages could prevent communications providers from knowing which people unsuccessfully sought access during the outages.¹²

As stated previously, call blocking is a direct measure of service impact. AT&T recommends that outages of at least 30 minutes duration that block (1) 90,000 real time call attempts, or (2) 30,000 call attempts for a similar period (historical blocked calls) be reported. While the implementation of a 'common metric' seems desirable, the Commission's recommendation assumes that telecommunications companies have the ability to identify each user. In reality this would be cumbersome, if not impossible to implement. The Numbering Resource Utilization Forecast ("NRUF") report cited in footnote 55 of the *NPRM* (Section 52.15(f)) which is used to explain how "potential users" would be determined (through the number of access lines sold) has nothing to do with working lines. This information is filed only twice a year and is obtained by rate centers from numbering resource record data, not switch data. In addition, the concept of

¹²

Id.

customers potentially affected is most appropriately applied to 911 service discussed below.

AT&T believes that the Commission's proposal has the potential to diffuse the wireline industry's focus on call blocking as the primary measure of telephony service impact. AT&T also believes that the proposal will unnecessarily redirect funding away from new services in order to develop and implement new systems and processes to monitor the new outage reporting metrics and require additional personnel to comply with the more extensive outage reporting obligation.

The *NPRM* further assumes that the proposed threshold criteria will enable the Commission to better assess the reliability of voice and data communications platforms.¹³ AT&T disagrees because the implementation of "user minutes" would be extremely burdensome to the telecommunications industry. AT&T believes reporting of outages of at least 30 minutes duration that block 90,000 real time call attempts or 30,000 call attempts for a similar period (historical blocked calls) is the better and preferable approach.

AT&T supports the NRSC/ILORI approach concerning those communications providers that do not have the ability to identify blocked call data, where a different threshold would be utilized. For those providers, an outage would be reportable if 1) the outage lasts for 30 or more minutes and 30,000 or more lines in service are affected, or

¹³ *NPRM* ¶ 23. ("For example, the individual failures of more than four-fifths of the wireline telephone switching centers in the United States would not be reportable under our current rule. One implication of the proposed approach is that outages in non-urban areas (i.e., most of the United States), where the end users potentially affected are likely to be smaller in number than for urban area outages, would nevertheless be required to be reported if those outages persisted for an excessively long time. In addition, urban area outages potentially affecting less than 30,000 end users would nevertheless have to be reported whenever their duration reaches the 900,000 user-minute threshold criteria.")

2) lasts for at least 6 hours and affects fewer than 30,000 lines in service, and 3) involves a survivable element. There are two technically feasible methods of implementing this methodology. For those carriers with the ability to use blocked call counts or historic traffic data, NRSC/ILORI proposes that the Commission consider IXC/LEC blocked calls and then use the most accurate, *i.e.*, real-time (90,000 or more blocked calls) or historic (30,000 or more calls) measure whenever the outage lasts for 30 minutes or longer and involves a survivable element (host and remote switches). If blocked call data is unavailable, then any outage that affects 30,000 or more "lines in service" lasting 30 minutes or more and involving a survivable element (host and remote switches) will be reportable to the Commission. Under this standard, any outage that affects fewer than 30,000 "lines in service" would also be reportable when the outage lasts for more than six (6) hours and involves a survivable element (host and remote switches).¹⁴

B. The Commission Should Adopt Call Blocking As The Metric For IXC/LEC Tandem Outage Reporting.

Section 63.100(g) of the Commission's rules states that for the tandem facilities of interexchange or local exchange carriers, "carriers must, if technically possible, use real-time blocked calls to determine whether criteria for reporting an outage have been reached. Carriers must report IXC/LEC tandem outages . . . where more than 90,000 calls are blocked during a period of 30 or more minutes for purposes of complying with

¹⁴ Beyond the remote switch, service interruptions caused by damage in the local loop cannot be restored until the infrastructure is physically repaired. This circumstance typically affects smaller numbers of customers, and would not be reportable. When this portion of the network sustains massive devastation, the customer's premises has generally sustained similar damage, and would likely have been evacuated for an indefinite period of time.

the 30,000 potentially affected customers threshold.”¹⁵ In the *NPRM*, the Commission proposes to modify this rule to replace the “customer” metric with the “assigned telephone number-minute” metric, in order to be consistent with the other modifications it has proposed.¹⁶ Recognizing that the term “blocked calls” is not clearly defined in Section 63.100, and that some companies count only originating calls that are blocked, while other companies count both originating and terminating blocked calls, the Commission proposes to require that all blocked calls, regardless of whether they are originating or terminating calls, be counted in determining compliance with the outage reporting threshold criteria.¹⁷

Because AT&T tandem switches have no terminating or originating calls, this terminology basically applies to calls experienced in an End Office. A tandem switch has outgoing and incoming calls. In case of a failure, blocked calls normally are incoming or outgoing, but not both. Thus, AT&T proposes to modify the definition of blocked calls. Blocked calls should be defined as pertaining to “incoming” or “outgoing” depending on the type of failure rather than “originating” and “terminating”. For example, if a switch suffers a failure it will block outgoing calls only, while incoming calls can be alternately routed. AT&T supports the NRSC/ILORI proposal, which would require wireline carriers to report outages either lasting 30 minutes or more or affecting either 30,000 or more calls processed by the tandem switch based on historic traffic data or 90,000 or more calls based on real-time data.

¹⁵ 47 C.F.R. § 63.100(g).

¹⁶ *NPRM*, ¶ 34.

¹⁷ *Id.*

AT&T disagrees with the proposed replacement of the “customer” metric with the “assigned telephone number-minute” metric. The “assigned telephone number-minute” metric assumes that service providers subject to the reporting requirements have access to accurate and timely data on administrative and assigned telephone numbers. To the contrary, AT&T does not have ready access to this information. Further, assigned telephone numbers as defined in the *NPRM* would be much greater than the number of telephone numbers actually in service.

In the *NPRM*, the Commission states that for outages in which the failure prevents the counting of blocked calls in either the originating or terminating direction, or in both directions, historical data may be used. In particular, the Commission states that “three times the actual number of carried calls for the same day of the week and the same time of day should be used as a surrogate for the number of blocked calls that could not be measured directly.” The Commission then clarifies that “blocked calls” are a “running measurement” made for the total duration of the outage.¹⁸ Recognizing that in rare cases, it may be possible to obtain the number of originating blocked calls only, or the number of terminating blocked calls only, but not both, the Commission proposes to require that the blocked-call count be doubled to compensate for the missing data unless the carrier certifies that only one direction of the call set-up was affected by the outage.¹⁹

AT&T does not believe that “three times the actual number of carried calls for the same day of the week and the same time of day should be used as a surrogate for the

¹⁸ *NPRM*, ¶ 35. (“That is, an outage that blocks only 50,000 calls in the first 30 minutes may nevertheless reach the 90,000 blocked-call threshold criterion if the outage lasts, for example, for one hour.”)

¹⁹ *Id.*

number of blocked calls that could not be measured directly.” Instead, AT&T recommends the use of the actual historical count as the basis for this measurement as a more accurate estimate of the number of calls affected by the outage. In addition, AT&T believes that the doubling of the incoming and outgoing calls is not a viable measurement. If the incoming call is blocked, there would not be a resultant switched call to generate an outgoing blocked call. AT&T believes that in instances where real time data is not available, historical data should be used.

IV. Reporting Requirements For Outages Affecting Special Offices And Facilities.

In the *NPRM*, the Commission proposes to simplify the requirements for reporting communications outages that potentially affect special offices and facilities or potentially affect the ability to complete 911 calls.²⁰ Section 63.100(e) of the Commission’s rules presently requires the reporting of outages of at least 30 minutes duration that potentially affect special offices and facilities or the ability to complete 911 calls.

A. The Commission Should Clarify Its Definition of “Airports.”

The Commission proposes to keep the requirement of Section 63.100(e) essentially intact with a minor modification that will make it applicable to all airports, not just major airports.²¹

AT&T believes that a further clarification to the Commission’s definition of the term “all airports” is necessary. There are currently 57,000 airports listed by the Federal

²⁰ *NPRM*, ¶ 24. ‘Special offices and facilities’ are defined as “major airports, major military installations, key government facilities, nuclear power plants” and include 911 facilities. *Id.* n. 56. *See* 47 C.F.R. § 63.100(a) (3).

²¹ 47 C.F.R. § 63.100(e).

Aviation Administration (“FAA”) and, therefore, it is not clear whether the rule contemplates inclusion of private as well as commercial airports. AT&T accordingly recommends retaining the current definition of “special offices and facilities” to include only “major” airports, but then expanding the reporting requirements for “major airports” to include outage reporting obligations at airports impacting air traffic operations at the top 136 prime hub airports (which include large, medium and small passenger hub airports) across the country, as listed on the FAA website and URL <http://www.faa.gov/arp/planning/stats/2002/CY02CommSerBoard.xls>.

AT&T also proposes that the conditions for reporting should be aligned with the recommendation made in the NRIC VI Focus Group 2 Report (“NRIC Report”). The NRIC Report recommends that an outage that affects a major, minor or small airport and is deemed “air traffic impacting” should be reported. “Air traffic impacting” is defined as the loss of greater than 50% of telecommunication services at a critical air traffic control facility including airports’ Terminal Radar Approach Control (TRACONS) or Air Traffic Control Towers (ATCTs) or a FAA Air Route Traffic Control Center (ARTCC) that impacts the ability of the air traffic facility to control air traffic as determined by the FAA Air Traffic Supervisor at the Air Traffic Systems Command Center (ATSCC). This may include loss of critical telecommunications services that transmit radar data, flight plan data or controller-to-pilot and controller-to-controller voice capabilities.

B. 911 Services

The *NPRM* states that the current requirements for reporting outages that potentially affect 911 services, which are currently differentiated by the length of the outage, the number of lines potentially affected, and other factors, may be overly

complex. Under current guidelines, 911 outages impacting less than 30,000 customers require reporting only if the Public Safety Answering Point (“PSAP”) outage exceeds 24 hours. The Commission proposes to revise these rules and simply require the reporting of all communications outages of at least 30 minutes duration that potentially affect the ability to originate, complete, or terminate 911 calls successfully (including the delivery of all associated name, identification, and location data).²² Anticipating that the public safety community and 911-type services will also evolve to utilize new technologies, services, and platforms, the Commission proposes to apply this requirement to all communications providers that are subject to general outage-reporting requirements.²³

AT&T agrees with the Commission’s conclusion that 24 hours is too long a period of time. However, the proposed 30 minute threshold is too short. Instead, AT&T supports the NRSC/ILORI position, which would require the following to be reported:

(1) PSAP outages affecting less than 30,000 users if: (a) the outage is caused by a failure in the communications provider’s network; (b) no reroute was available; and (c) the outage lasts six (6) hours or more.

(2) PSAP outage affecting 30,000 or more users if: (a) the outage is caused by a failure in the communications provider’s network; (b) no reroute was available; and (c) the outage lasts for 30 minutes or more.

(3) The loss of all call processing capabilities in one or more E911 tandems/selective router for at least 30 minutes duration or

²² *NPRM*, ¶ 25.

²³ The Commission also seeks comment on its proposal to delay implementation of its requirements until issues raised in its Mobile Satellite Service proceeding are resolved. (“In a separate proceeding, however, we have been considering E911 implementation issues for Mobile Satellite Service providers and have concluded that MSS providers of interconnected two-way voice service have an E911 compliance obligation, specifically to establish call centers for the purpose of answering 911 emergency calls and forwarding these calls to an appropriate PSAP. Although we propose that MSS providers of interconnected voice service be subject to E911 outage reporting requirements, we propose to delay implementation of these requirements until the implementation issues raised in the 2nd Further Notice portion of the separate proceeding are resolved. We seek comment on these conclusions and proposals.”) *Id.*

(4) The isolation of one or more end office switches or host/remote clusters if: a) the outage caused 30,000 or more subscribers to be isolated from 911 for 30 minutes or more; or b) the outage caused less than 30,000 subscribers to be isolated from 911 for six (6) hours or more.

Additionally, AT&T does not believe that delivery of Associated Name Identification, and Location Data (“ANI/ALI”) is necessary to complete a 911 call. Loss of ANI/ALI does not prohibit the customers’ ability to use 911 service. Existing wireline reporting requirements for PSAPs are more appropriate, since the architecture and nature of the service provided to the PSAP are based on the customer’s PSAP requirements.

Moreover, the recently released NRIC VII Charter has identified a Focus Group (1.C) that will be responsible for identifying the appropriate reporting requirements for outages affecting E911 services. The Focus Group will present its interim report by September 25, 2004 and its final report by December 16, 2005. AT&T recommends that the Commission hold in abeyance any outage reporting rule relating to E911 service in order to provide the Focus Group 1.C time to report its findings and recommendations to the NRIC VII Steering Committee and the Commission.

C. Elimination of Separate Reporting Requirement for Fires.

In the *NPRM*, the Commission proposes to eliminate the separate reporting requirement for fire-related incidents.²⁴ AT&T supports the Commission’s proposal to remove separate reporting requirements for outages resulting from fires. AT&T agrees that the Commission’s proposed general reporting requirements sufficiently address outages caused by fire-related incidents.

²⁴ *NPRM*, ¶ 26; 47 C.F.R. § 63.100(d).

V. The Technical Capabilities of the Communications Provider Should Be A Significant Factor When Establishing The Outage Reporting Thresholds for Major Infrastructure Failures.

A. DS3 Minutes.

The Commission proposes to establish additional outage reporting criteria that would apply to failures of communications infrastructure components having significant traffic-carrying capacity. This requirement would apply to those communications providers for which the Commission has already proposed outage reporting requirements and would also apply to those affiliated and non-affiliated entities that maintain or provide communications systems on their behalf.²⁵

The Commission states that the threshold reporting criterion for such infrastructure outages should be based on the number of DS3 minutes affected by the outage because DS3s are the common denominator used throughout the communications industry as a measure of capacity.²⁶ The Commission further notes that it regards the failure of at least 30 minutes duration of a satellite or any of its in-service transponders as

²⁵ *NPRM*, ¶ 47.

²⁶ *Id.* (“A DS3 can handle 28 DS1s (T1s) or 672 DS0 (64 kbps voice or data circuits). On the higher end of the multiplexing hierarchy, an OC3 includes 3 DS3s, an OC48 includes 48 DS3s, and an OC192 includes 192 DS3s. Specifically, we propose to require the reporting of all outages of at least 30 minutes duration that potentially affect at least 1,350 DS3 minutes. We propose to count only working DS3s in this measure, by which we mean those actually carrying some traffic of any type at the time of a failure. For example, an OC24 could have a maximum of 24 DS3s working, but at the time of a failure might have only 10 DS3s that are in working condition and equipped with the necessary electronics. In this case, only the 10 DS3s would be counted in determining whether the threshold reporting criterion had been met.”)

a major infrastructure failure and proposes to require reporting of such outages.²⁷

Whenever any of these criteria are exceeded, the outage would be reportable and the values of all three measures, if applicable, would be required.

AT&T recommends that any reporting threshold for DS3 minutes be based on the technical capabilities of the provider and on generally acceptable engineering principles with the understanding that the service provider's first responsibility is to the successful restoration of service. Based upon these principles, an outage would be considered reportable if it met the following conditions: (1) lasts for 30 minutes or more, affects 48 DS3s²⁸ or more, does not switch to protect mode within a service provider's network and the service provider owns, operates and maintains the electronic terminal equipment at both end points; or (2) lasts for eight (8) hours or more, affects at least 24 (but less than 48) DS3s, does not switch to protect mode within a service provider's network and the service provider owns, operates and maintains the electronic terminal equipment at both end points.

Further, when customers lease transport services and specify in the Service Level Agreement that the service excludes back-up restoration service, AT&T believes that this transport capacity should not be subject to reporting.

²⁷ *Id.* ("We stress that the 1,350 DS3-minute and the satellite/transponder failure reporting criteria would be in addition to the 90,000 blocked-call and the 900,000 user-minute criteria proposed in the previous sections of the Notice.")

²⁸ AT&T recommends that the reporting threshold be based on 48 DS3's, as this is a more common denomination of capacity than the 45 DS3's proposed in the *NPRM*.

B. Signaling System Seven (“SS7”).

In the *NPRM*, the Commission states that SS7 systems provide information to process and terminate virtually all domestic and international telephone calls irrespective of whether the call is wireless, wireline, local, long distance, or dial-up telephone modem access to ISPs. SS7 is also used in providing SMS text messaging services, 8XX number (*i.e.*, toll free) services, local number portability, VoIP Signaling Gateway services, 555 type number services, and most paging services.²⁹

Currently, the Commission’s rules do not require outage reporting by those companies that do not provide service directly to end users. In addition, even for companies currently subject to outage reporting requirements, no threshold reporting criteria are currently based on blocked or lost SS7 messages.³⁰ The Commission thus proposes the addition of SS7 communications disruption reporting requirements. All providers of SS7 service (or its equivalent) would be required to report those communications disruptions of at least 30 minutes duration for which the number of blocked or lost ISDN User Part (ISUP) messages (or its equivalent) was at least 90,000.³¹

Because most STP and/or end offices do not capture ISUP messages, any change in the functionality of existing equipment would involve extensive software and hardware development and deployment costs. Moreover, although AT&T agrees that third party

²⁹ *NPRM*, ¶ 48.

³⁰ *Id.*

³¹ *Id.* For avoidance of doubt, the Commission notes that the reporting threshold will resemble the threshold for wireline telephony outage reporting. (“This reporting threshold is similar to the one for blocked calls that was addressed in connection with the wireline telephony outage reporting criteria (see *supra* ¶ 35). We request comment on these conclusions and proposed addition to our rules.”)

entities providing SS7 service should be subject to the same final reporting guidelines as carriers, traditional local and interexchange service providers already include and report SS7 service outages as part of the count of blocked calls.

Therefore, AT&T instead recommends the NRSC/ILORI position on SS7 Service interruptions, which takes into consideration the technical capabilities of the provider:

“... the outage reporting threshold for SS7 services takes into account whether these services are provided by the network operator or by a third party. If SS7 signaling is within a service provider’s network and the service provider is responsible for maintenance of the SS7 links at both end points, ATIS recommends that the reporting criteria be based on the performance measurement proposed by NRSC/ILORI (i.e., blocked calls [historic (30,000) or real-time (90,000)], lasting 30 or more minutes and involving a survivable element). However, if a third party is providing SS7 services on behalf of the network operator, then the third party must submit reports for SS7 outages upon notification from the network operator that outage reporting thresholds have been met or exceeded.”

VI. The Commission Should Consider A Three-Step Approach For Filing Outage Reports.

The Commission notes that improvement in outage filing requirements, as well as the proposed electronic filing process, should make it easy for communications providers to file initial disruption reports within 120 minutes of discovering a reportable outage, which, in turn, will facilitate more rapid action in the event of a serious crisis, and will also facilitate more rapid, coherent, and accurate responses when multiple outages are occurring during simultaneous (or virtually coincident) crises. Thus, the Commission proposes to require all initial outage reports to be filed electronically within 120 minutes of becoming reportable and all final outage reports to be filed within 30 days of the initial

report.³²

Although AT&T supports the Commission's efforts to streamline and simplify outage reporting requirements, AT&T recommends adoption of the NRSC/ILORI position, which suggests certain modifications to the Commission's proposal to include a three-stage process for reporting outages:

"Step One -- Notification. Within 120 minutes of a provider's knowledge of an outage, a provider must notify the Commission of the outage. This notification would not require the completion of the detailed template proposed by the Commission. The provider would notify appropriate Commission personnel via e-mail, facsimile or telephone that a reportable incident has occurred or is occurring. The outage notification would not be accompanied by a signed affidavit.

Step Two -- Initial Report. Within three (3) days of the notification, the provider would be required to submit an initial report. This report would provide more information on the extent of the incident, such as the impact of the event, the resolution (if available) and the known causes. As full and complete information on the incident may not be available at this point, the Initial Report would be signed by a legal representative of the provider, but without the Commission's proposed attestation.

Step Three -- Final Report. Within thirty (30) days of the incident, the carrier would submit a final report form providing all necessary information about the incident, its cause and resolution. The Final Report would include the proposed attestation (pursuant to Section 4.11 of the proposed rules)."

A. Other Modifications To The Reporting Requirements.

The Commission proposes that the existing requirements for final disruption reports be modified to include a statement as to whether the reported outage was at least partially caused because the network did not follow engineering standards for full

³² *NPRM*, ¶ 30. ("We seek comment on these conclusions and proposed requirements. We also seek comment as to whether, given the rapid response time that the Internet and circuit-switched telephony (e.g., dial-up modems) enable, we should require the filing of initial outage reports over the Internet within a shorter period of time than the 120-minute period discussed above.")

diversity (redundancy) as well as a statement of all causes of the outage.³³ Anticipating that communications may increasingly be offered through complex arrangements among communications providers and other entities (which may or may not be affiliated with the provider) that maintain or provide communications systems or services for them, the Commission proposes that these entities be required to comply with any disruption reporting requirements that it may adopt to the same extent as would be required of the communications provider if it were directly providing the voice or data communications or maintaining the system.³⁴

AT&T agrees with the NRSC/ILORI position that there may be only one root, or primary, cause of an outage. Other pertinent factors may be identified as additional causes of an outage, and each of these items should be included in the final report as contributing factors, though not considered the root cause. AT&T routinely evaluates the use of redundancy and diversity Best Practices as part of its compilation of a final report. Although “redundancy” and “diversity” may be highlighted as potential root causes, the engineering and provision of diverse or redundant circuitry is often a business decision because additional construction and maintenance of these facilities carry a heavy price tag for the communications provider. Every service provider must perform its own business continuity analysis in support of additional diversity, and reach its own

³³ *NPRM*, ¶ 31. As the Commission states “outages may result from the occurrence of several events. The current rule requires that the final report identify the root cause. Experience in administering this part of our rules has convinced us that there may be more than one root cause and that, to facilitate analysis, all causes of each outage should be reported.”

³⁴ *Id.* (“For example, local exchange carriers have long provided Signaling System 7 (“SS7”) communications for their own use as well as for their customers, but some entities have more recently emerged to provide SS7 for such carriers.”)

conclusions concerning the appropriate level of resiliency to be built into its network. AT&T therefore believes that the requirement of an additional statement would be duplicative of its present efforts.

VII. Any Substantive Changes To The Commission's Proposed Template Should Only Be Adopted Through The Commission's Notice and Comment Process.

The Commission proposes to require that communications outage reports be filed electronically through the type of template identified in Appendix B to the *NPRM*, in order to minimize the amount of time and effort that will be required to comply with these new proposed rules.³⁵

AT&T is concerned that unless the new template has the ability to electronically provide a copy, preferably with an automated FCC serial number to prove the document was received, it will either have to maintain a separate copy of the initial and final reports in some secondary format (*e.g.*, word document) or the Commission will have to accept a "saved as" copy of reports as proof of being provided to the web site.

Electronic filing raises an additional concern. The Commission has not addressed the situation when a communications provider needs to withdraw an initial report. Consistent with the Commission's proposed 120 minute reporting window, AT&T foresees instances where initial reports will be reported in reaction to some event that upon later review did not meet any report criteria. With no way to withdraw or even mark the reports as withdrawn, the communications provider will be forced to access the document and provide an online explanation of why the incident may not be reportable.

³⁵ *NPRM*, ¶¶ 50-55; *See also* Appendix B.

Entering these types of comments on a frequent basis may take as long as entering a final report.

Additionally, the Commission does not address how it will protect this electronic data, how it will be backed up, and what assurances it will provide in the event an electronic filing is lost either due to an electronic "accident" or human error. Further, with a limited ability to maintain a record of the report, the Commission could require or request one or all providers to re-issue outage reports into the system in the event of an accidental data loss situation. In some cases this will require duplicative work in order to re-enter the data.

Further, the Commission proposes to delegate authority to the Chief, Office of Engineering and Technology to make revisions to the filing system and template necessary to maximize the efficiency of reporting and responding to critical data and to minimize the time for providers to prepare and for the Commission staff to review the communications disruption reports required to be filed pursuant to the proposed new rules.³⁶ AT&T supports the Commission's proposal to the extent that any change to the filing system or template is of a non-substantive nature. Examples of a non-substantive change may include such things as corrections of misspellings, moving data fields around on the form for better grouping, correction of problems with web code so existing features work correctly, or changes in FCC contact information or user's instructions. However, AT&T recommends that any substantive changes, including such changes as adding or deleting fields, renaming or otherwise changing field names, changing the

³⁶ *NPRM*, ¶ 51; *See also* Appendix A, Proposed Rule § 0.241(a)(1).

method of entering, and updating or removing data, should be considered and adopted through the Commission's formal Notice and Comment process.

VIII. Information Provided To The Commission Should Remain Protected From Public Disclosure.

Finally, the Commission seeks comment on whether the present policy of making outage reports from wireline carriers available to the public should continue to be applied, in whole or in part, to outage reports that will be filed by wireline, wireless, satellite, or cable providers.³⁷

First, AT&T proposes that all reporting, including current mandatory reporting requirements, should be made voluntary and should be routed through the Department of Homeland Security's ("DHS") Protection of Critical Infrastructure Information ("PCII") Program Office to the National Communications System ("NCS"), and then to the Commission to ensure that all the information provided in the outage reports, which contains critical infrastructure information, is protected from public disclosure.

Specifically, this proposal contemplates the use of a web-based computer program (previously developed by NRSC/ILORI and implemented in March 2004 for wireline, wireless, satellite, cable, data, ISP, and DSL service providers) to voluntarily report service disruptions. Currently, the web-based computer program is managed and maintained on a communications vendor server. The data is accessible by the National Coordinating Center (part of DHS) that works with the entity submitting the data to ensure it meets the data element and company confidential information objectives.

³⁷ *NPRM*, ¶ 52.

Once the data has been scrubbed, it is provided to the Commission and the NRSC/ILORI for analysis. There have been industry discussions about moving the raw data and programming from the existing communications vendor server to either a Federal location (NCC) or to a third party server that does not have a stake in the communications industry, for example, an institution of higher learning. This scenario would provide increased security for company confidential data and the possibility of obtaining PCII status, as a result of participating in a voluntary outage program. An ongoing major concern of the industry remains the public dissemination and availability of critical infrastructure information (communications that have been identified as part of the national critical infrastructure) to someone who has a desire to do harm to the national communications network.

Moreover, by initially providing voluntary reporting to the DHS, in the event of a terrorist attack or act of nature that affects all major utilities, including the communications infrastructure, one agency would maintain responsibility for leadership of all coordinating restoration efforts. The coordination of a unified response would result in greater efficiency in the restoration and recovery process.³⁸

Alternatively, the Commission should, at the very least, provide certainty that all data submitted, whether mandatory or voluntary, is protected from public disclosure. The Commission should not impose any additional mandatory reporting requirements unless and until it can ensure that mandatory data is fully protected from disclosure in the public domain. In that regard, AT&T urges the Commission to abolish the existing policy of

³⁸ The Commission also recognizes the importance of the communications infrastructure and the essential services it provides to Homeland Security. *See, NPRM*, ¶ 46.

making outage reports from wireline carriers available to the public and to extend that policy to outage reports that are filed by all communications providers.

CONCLUSION

For all of the foregoing reasons, AT&T urges the Commission to: (1) adopt outage reporting requirements that promote industry cooperation; (2) encourage voluntary reporting by the industry and all the processes supporting the voluntary outage reporting initiative; (3) continue to support the development of Best Practices in the NRIC; (4) adopt the ‘common metric’ of blocked calls for both voice telephony service outage and IXC/LEC tandem outage reporting; (5) support the NRSC/ILORI recommendation to expand the meaning of “major airports” within the definition of “special offices and facilities;” (6) support the NRSC/ILORI proposal for reporting outages affecting 911 services; (7) consider the technical capabilities of the communications provider before imposing additional reporting requirements for outages involving major infrastructure failures; (8) adopt the proposed NRSC/ILORI three-step outage reporting process, rather than the two-tier process put forward by the Commission; (9) require substantive changes to the Commission’s proposed template be

accomplished through the Commission's formal Notice and Comment process; and, most importantly, (10) protect all outage reporting data provided to the Commission from public disclosure.

Respectfully submitted,

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Dated: May 25, 2004

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Comments of AT&T Corp. was served by the noted methods, the 25th day of May, 2004 on the following:

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